

Commission Regulation (EU) 2017/2195 of 23 November 2017  
establishing a guideline on electricity balancing (Text with EEA relevance)

TITLE V

**SETTLEMENT**

CHAPTER 1

***Settlement principles***

*Article 44*

**General principles**

- 1 The settlement processes shall:
  - a establish adequate economic signals which reflect the imbalance situation;
  - b ensure that imbalances are settled at a price that reflects the real time value of energy;
  - c provide incentives to balance responsible parties to be in balance or help the system to restore its balance;
  - d facilitate harmonisation of imbalance settlement mechanisms;
  - e provide incentives to TSOs to fulfil their obligations pursuant to Article 127, Article 153, Article 157 and Article 160 of Regulation (EU) 2017/1485;
  - f avoid distorting incentives to balance responsible parties, balancing service providers and TSOs;
  - g support competition among market participants;
  - h provide incentives to balancing service providers to offer and deliver balancing services to the connecting TSO;
  - i ensure the financial neutrality of all TSOs.
- 2 Each relevant regulatory authority in accordance with Article 37 of Directive 2009/72/EC shall ensure that all TSOs under its competence do not incur economic gains or losses with regard to the financial outcome of the settlement pursuant to Chapters 2, 3 and 4 of this Title, over the regulatory period as defined by the relevant regulatory authority, and shall ensure that any positive or negative financial outcome as a result of the settlement pursuant to Chapters 2, 3 and 4 of this Title shall be passed on to network users in accordance with the applicable national rules.
- 3 Each TSO may develop a proposal for an additional settlement mechanism separate from the imbalance settlement, to settle the procurement costs of balancing capacity pursuant to Chapter 5 of this Title, administrative costs and other costs related to balancing. The additional settlement mechanism shall apply to balance responsible parties. This should be preferably achieved with the introduction of a shortage pricing function. If TSOs choose another mechanism, they should justify this in the proposal. Such a proposal shall be subject to approval by the relevant regulatory authority.
- 4 Each injection or withdrawal into or from a scheduling area of a TSO shall either be settled in accordance with Chapter 3 or Chapter 4 of Title V.

---

**Changes to legislation:** There are outstanding changes not yet made to Commission Regulation (EU) 2017/2195. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

---

## CHAPTER 2

### Settlement of balancing energy

#### Article 45

#### Balancing energy calculation

- 1 As regards the settlement of balancing energy for at least the frequency restoration process and the reserve replacement process, each TSO shall establish a procedure for:
- the calculation of the activated volume of balancing energy based on requested or metered activation;
  - claiming the recalculation of the activated volume of balancing energy.
- 2 Each TSO shall calculate the activated volume of balancing energy according to the procedures pursuant to paragraph 1(a) at least for:
- each imbalance settlement period;
  - its imbalance areas;
  - each direction, with a negative sign indicating relative withdrawal by the balancing service provider, and a positive sign indicating relative injection by the balancing service provider.
- 3 Each connecting TSO shall settle all activated volumes of balancing energy calculated pursuant to paragraph 2, with the concerned balancing service providers.

#### Article 46

#### Balancing energy for frequency containment process

- 1 Each connecting TSO may calculate and settle the activated volume of balancing energy for the frequency containment process with balancing service providers pursuant to paragraphs 1 and 2 of Article 45.
- 2 The price, be it positive, zero or negative, of the activated volume of balancing energy for the frequency containment process shall be defined for each direction as defined in Table 1:

TABLE 1

#### Payment for balancing energy

	<b>Balancing energy price positive</b>	<b>Balancing energy price negative</b>
<b>Positive balancing energy</b>	Payment from TSO to BSP	Payment from BSP to TSO
<b>Negative balancing energy</b>	Payment from BSP to TSO	Payment from TSO to BSP

---

**Changes to legislation:** There are outstanding changes not yet made to Commission Regulation (EU) 2017/2195. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details) [View outstanding changes](#)

---

#### *Article 47*

### **Balancing energy for frequency restoration process**

1 Each connecting TSO shall calculate and settle the activated volume of balancing energy for the frequency restoration process with balancing service providers pursuant to paragraphs 1 and 2 of Article 45

2 The price, be it positive, zero or negative, of the activated volume of balancing energy for the frequency restoration process shall be defined for each direction pursuant to Article 30 as defined in the Table 1.

#### *Article 48*

### **Balancing energy for reserve replacement process**

1 Each connecting TSO shall calculate and settle the activated volume of balancing energy for the reserve replacement process with balancing service providers pursuant to paragraphs 1 and 2 of Article 45.

2 The price, be it positive, zero or negative, of the activated volume of balancing energy for reserve replacement process shall be defined for each direction pursuant to Article 30 as defined in the Table 1.

#### *Article 49*

### **Imbalance adjustment to the balance responsible party**

1 Each TSO shall calculate an imbalance adjustment to be applied to the concerned balance responsible parties for each activated balancing energy bid.

2 For imbalance areas where several final positions for a single balance responsible party are calculated pursuant to Article 54(3), an imbalance adjustment may be calculated for each position.

3 For each imbalance adjustment, each TSO shall determine the activated volume of balancing energy calculated pursuant to Article 45 and any volume activated for purposes other than balancing.

## *CHAPTER 3*

### ***Settlement of the exchanges of energy between TSOs***

#### *Article 50*

### **Intended exchanges of energy**

1 By one year after the entry into force of this Regulation, all TSOs shall develop a proposal for common settlement rules applicable to all intended exchanges of energy as a result

---

*Changes to legislation: There are outstanding changes not yet made to Commission Regulation (EU) 2017/2195. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes*

---

of one or more of the following processes pursuant to Articles 146, 147 and 148 of Regulation (EU) 2017/1485, for each of the following:

- a the reserve replacement process;
- b the frequency restoration process with manual activation;
- c the frequency restoration process with automatic activation;
- d the imbalance netting process.

2 Each TSO-TSO settlement function shall perform the settlement in accordance with the settlement rules pursuant to paragraph 1.

3 By eighteen months after the entry into force of this Regulation, all TSOs intentionally exchanging energy within a synchronous area shall develop a proposal for common settlement rules applicable to intended exchanges of energy, as a result of one or both:

- a the frequency containment process pursuant to Article 142 of Regulation (EU) 2017/1485;
- b the ramping period pursuant to Article 136 of Regulation (EU) 2017/1485.

4 By eighteen months after the entry into force of this Regulation, all asynchronously connected TSOs intentionally exchanging energy between synchronous areas shall develop a proposal for common settlement rules applicable to intended exchanges of energy, as a result of one or both:

- a frequency containment process for active power output on synchronous area level pursuant to Articles 172 and 173 of Regulation (EU) 2017/1485;
- b ramping restrictions for active power output on synchronous area level pursuant to Article 137 of Regulation (EU) 2017/1485.

5 The common settlement rules in accordance with paragraph 1 shall at least contain the provisions that the intended exchange of energy is calculated on the basis of the following criteria:

- a over periods agreed among relevant TSOs;
- b per direction;
- c as the integral of the calculated power interchange over the periods pursuant to paragraph 5 (a).

6 The common settlement rules of intended exchanges of energy in accordance with paragraphs 1(a), 1(b) and 1(c) shall take into account:

- a all balancing energy prices established pursuant Article 30(1);
- b the methodology for pricing of cross-zonal capacity used for the exchange of balancing energy pursuant Article 30(3).

7 The common settlement rules of intended exchanges of energy in accordance with paragraph 1(d) shall take into account the methodology for pricing of cross-zonal capacity used for operating the imbalance netting process pursuant Article 30(3).

8 All TSOs shall establish a coordinated mechanism for adjustments to settlements between all TSOs.

---

**Changes to legislation:** There are outstanding changes not yet made to Commission Regulation (EU) 2017/2195. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

---

### Article 51

#### Unintended exchanges of energy

1 By eighteen months after the entry into force of this Regulation, all TSOs of a synchronous area shall develop a proposal for common settlement rules applicable to all unintended exchanges of energy. The proposal shall include the following requirements:

- a the price for unintended exchanges of energy withdrawn from the synchronous area shall reflect the prices for activated upward balancing energy for frequency restoration process or reserve replacement process for this synchronous area;
- b the price for unintended exchanges of energy injected into the synchronous area shall reflect the prices for activated downward balancing energy for frequency restoration process or reserve replacement process for this synchronous area.

2 By eighteen months after the entry into force of this Regulation, all asynchronously connected TSOs shall develop a proposal for common settlement rules applicable to all unintended exchanges of energy between asynchronously connected TSOs.

3 The proposals of common settlement rules of unintended exchanges of energy between TSOs shall ensure a fair and equal distribution of costs and benefits between them.

4 All TSOs shall establish a coordinated mechanism for adjustments to settlements between them.

### CHAPTER 4

#### Imbalance settlement

### Article 52

#### Imbalance settlement

1 Each TSO or, where relevant, third party shall settle within its scheduling area or scheduling areas when appropriate with each balance responsible party for each imbalance settlement period pursuant to Article 53 all calculated imbalances pursuant to Article 49 and Article 54 against the appropriate imbalance price calculated pursuant to Article 55.

2 By one year after entry into force of this Regulation, all TSOs shall develop a proposal to further specify and harmonise at least:

- a the calculation of an imbalance adjustment pursuant to Article 49 and the calculation of a position, an imbalance and an allocated volume following one of the approaches pursuant to Article 54(3);
- b the main components used for the calculation of the imbalance price for all imbalances pursuant to Article 55 including, where appropriate, the definition of the value of avoided activation of balancing energy from frequency restoration reserves or replacement reserves;
- c the use of single imbalance pricing for all imbalances pursuant to Article 55, which defines a single price for positive imbalances and negative imbalances for each imbalance price area within an imbalance settlement period; and

---

**Changes to legislation:** There are outstanding changes not yet made to Commission Regulation (EU) 2017/2195. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

---

- d the definition of conditions and methodology for applying dual imbalance pricing for all imbalances pursuant to Article 55, which defines one price for positive imbalances and one price for negative imbalances for each imbalance price area within an imbalance settlement period, encompassing:
- (i) conditions on when a TSO may propose to its relevant regulatory authority in accordance with Article 37 of Directive 2009/72/EC the application of dual pricing and which justification must be provided;
  - (ii) the methodology for applying dual pricing.
- 3 The proposal pursuant to paragraph 2 may distinguish between self-dispatching models and central dispatching models.
- 4 The proposal pursuant to paragraph 2 shall provide an implementation date no later than eighteen months after approval by all relevant regulatory authorities in accordance with Article 5(2).

### *Article 53*

#### **Imbalance settlement period**

- 1 By three years after the entry into force of this Regulation, all TSOs shall apply the imbalance settlement period of 15 minutes in all scheduling areas while ensuring that all boundaries of market time unit shall coincide with boundaries of the imbalance settlement period.
- 2 The TSOs of a synchronous area may jointly request an exemption from the requirement laid down in paragraph 1.
- 3 Where the relevant regulatory authorities of a synchronous area grant an exemption from the requirement laid down in paragraph 1 upon a joint request of the TSOs in the concerned synchronous area or at their own initiative, they shall perform, in cooperation with the Agency and at least every three years, a cost-benefit analysis concerning the harmonisation of the imbalance settlement period within and between synchronous areas.

### *Article 54*

#### **Imbalance calculation**

- 1 Each TSO shall calculate within its scheduling area or scheduling areas when appropriate the final position, the allocated volume, the imbalance adjustment and the imbalance:
- a for each balance responsible party;
  - b for each imbalance settlement period;
  - c in each imbalance area.
- 2 The imbalance area shall be equal to the scheduling area, except in case of a central dispatching model where imbalance area may constitute a part of scheduling area.
- 3 Until the implementation of the proposal pursuant to Article 52(2), each TSO shall calculate the final position of a balance responsible party using one of the following approaches:
- a balance responsible party has one single final position equal to the sum of its external commercial trade schedules and internal commercial trade schedules;

---

**Changes to legislation:** There are outstanding changes not yet made to Commission Regulation (EU) 2017/2195. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

---

- b balance responsible party has two final positions: the first is equal to the sum of its external commercial trade schedules and internal commercial trade schedules from generation, and the second is equal to the sum of its external commercial trade schedules and internal commercial trade schedules from consumption;
  - c in a central dispatching model, a balance responsible party can have several final positions per imbalance area equal to generation schedules of power generating facilities or consumption schedules of demand facilities.
- 4 Each TSO shall set up the rules for:
- a the calculation of the final position;
  - b the determination of the allocated volume;
  - c the determination of the imbalance adjustment pursuant to Article 49;
  - d the calculation of the imbalance;
  - e claiming the recalculation of the imbalance by a balance responsible party.
- 5 Allocated volume shall not be calculated for a balance responsible party which does not cover injections or withdrawals.
- 6 An imbalance shall indicate the size and the direction of the settlement transaction between the balance responsible party and the TSO; an imbalance can have alternatively:
- a a negative sign, indicating a balance responsible party's shortage;
  - b a positive sign, indicating a balance responsible party's surplus.

#### *Article 55*

#### **Imbalance price**

- 1 Each TSO shall set up rules to calculate the imbalance price, which can be positive, zero or negative, as defined in Table 2:

*TABLE 2*

#### **Payment for imbalance**

	<b>Imbalance price positive</b>	<b>Imbalance price negative</b>
<b>Positive imbalance</b>	Payment from TSO to BRP	Payment from BRP to TSO
<b>Negative imbalance</b>	Payment from BRP to TSO	Payment from TSO to BRP

- 2 The rules pursuant to paragraph 1 shall include a definition of the value of avoided activation of balancing energy from frequency restoration reserves or replacement reserves.
- 3 Each TSO shall determine the imbalance price for:
- a each imbalance settlement period;
  - b its imbalance price areas;
  - c each imbalance direction.
- 4 The imbalance price for negative imbalance shall not be less than, alternatively:
- a the weighted average price for positive activated balancing energy from frequency restoration reserves and replacement reserves;

---

**Changes to legislation:** There are outstanding changes not yet made to Commission Regulation (EU) 2017/2195. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

---

- b in the event that no activation of balancing energy in either direction has occurred during the imbalance settlement period, the value of the avoided activation of balancing energy from frequency restoration reserves or replacement reserves.
- 5 The imbalance price for positive imbalance shall not be greater than, alternatively:
- a the weighted average price for negative activated balancing energy from frequency restoration reserves and replacement reserves;
  - b in the event that no activation of balancing energy in either direction has occurred during the imbalance settlement period, the value of the avoided activation of balancing energy from frequency restoration reserves or replacement reserves.
- 6 In the event that both positive and negative balancing energy from frequency restoration reserves or replacement reserves have been activated during the same imbalance settlement period, the imbalance settlement price shall be determined for positive imbalance and negative imbalance based on at least one of the principles pursuant to paragraphs 4 and 5.

## CHAPTER 5

### *Settlement of balancing capacity*

#### *Article 56*

#### **Procurement within a scheduling area**

- 1 Each TSO of a scheduling area using balancing capacity bids shall establish rules for the settlement of at least frequency restoration reserves and replacement reserves pursuant to the requirements set out in Article 32.
- 2 Each TSO of a scheduling area using balancing capacity bids shall settle at least all procured frequency restoration reserves and replacement reserves pursuant to the requirements set out in Article 32.

#### *Article 57*

#### **Procurement outside a scheduling area**

- 1 All TSOs exchanging balancing capacity shall establish rules for the settlement of procured balancing capacity pursuant to Article 33 and Article 35.
- 2 All TSOs exchanging balancing capacity shall jointly settle procured balancing capacity using the TSO-TSO settlement function pursuant to Article 33. TSOs exchanging balancing capacity based on a TSO-BSP model shall settle procured balancing capacity pursuant to Article 35.
- 3 All TSOs exchanging balancing capacity shall establish rules for the settlement of allocation of cross-zonal capacity pursuant to Chapter 2 of Title IV.
- 4 All TSOs exchanging balancing capacity shall settle the allocated cross-zonal capacity pursuant to Chapter 2 of Title IV.



### Changes to legislation:

There are outstanding changes not yet made to Commission Regulation (EU) 2017/2195. Any changes that have already been made to the legislation appear in the content and are referenced with annotations.

View outstanding changes

### Changes and effects yet to be applied to :

- Regulation revoked by [S.I. 2019/532 reg. 5\(2\)](#) (This amendment not applied to [legislation.gov.uk](#). Reg. 5(2) omitted (15.9.2020) by virtue of [S.I. 2020/1016](#), regs. 1(2), 5(3))

### Changes and effects yet to be applied to the whole legislation item and associated provisions

- Title 2 Ch. 2 heading substituted by [S.I. 2019/532 Sch. 2 para. 19](#)
- Title 3 Ch. 1 omitted by [S.I. 2019/532 Sch. 2 para. 22](#)
- Title 3 Ch. 3 omitted by [S.I. 2019/532 Sch. 2 para. 26](#)
- Title 4 omitted by [S.I. 2019/532 Sch. 2 para. 27](#)
- Title 5 Ch. 3 omitted by [S.I. 2019/532 Sch. 2 para. 31](#)
- Title 6 omitted by [S.I. 2019/532 Sch. 2 para. 36](#)
- Title 10 heading words omitted by [S.I. 2019/532 Sch. 2 para. 42](#)
- Signature words omitted by [S.I. 2019/532 Sch. 2 para. 44](#)
- Art. 2(18)-(21) omitted by [S.I. 2019/532 Sch. 2 para. 3\(3\)\(a\)](#)
- Art. 2(23)-(25) omitted by [S.I. 2019/532 Sch. 2 para. 3\(3\)\(a\)](#)
- Art. 2(27) words omitted by [S.I. 2019/532 Sch. 2 para. 3\(3\)\(b\)](#)
- Art. 2(28)-(32) omitted by [S.I. 2019/532 Sch. 2 para. 3\(3\)\(c\)](#)
- Art. 2(34)-(45) omitted by [S.I. 2019/532 Sch. 2 para. 3\(3\)\(c\)](#)
- Art. 2(46)-(49) inserted by [S.I. 2019/532 Sch. 2 para. 3\(3\)\(d\)](#)
- Art. 2(46)-(48) words substituted in earlier amending provision [S.I. 2019/532](#), Sch. 2 para. 3(3)(d) by [S.I. 2020/1016 reg. 5\(5\)\(b\)](#)
- Art. 2(49) omitted in earlier amending provision [S.I. 2019/532](#), Sch. 2 para. 3(3)(d) by [S.I. 2020/1006 reg. 2\(2\)](#)
- Art. 3(1)(b) words omitted by [S.I. 2019/532 Sch. 2 para. 4\(2\)\(a\)](#)
- Art. 3(1)(d) words omitted by [S.I. 2019/532 Sch. 2 para. 4\(2\)\(b\)](#)
- Art. 3(1)(e) words substituted by [S.I. 2019/532 Sch. 2 para. 4\(2\)\(c\)](#)
- Art. 3(1)(g) words substituted by [S.I. 2019/532 Sch. 2 para. 4\(2\)\(d\)](#)
- Art. 3(2)(f) words substituted by [S.I. 2019/532 Sch. 2 para. 4\(3\)\(b\)](#)
- Art. 3(2)(h) word omitted by [S.I. 2019/532 Sch. 2 para. 4\(3\)\(c\)](#)
- Art. 5(4)(d)(e) omitted by [S.I. 2019/532 Sch. 2 para. 6\(4\)\(b\)](#)
- Art. 5(4)(j)(k) inserted by [S.I. 2019/532 Sch. 2 para. 6\(4\)\(c\)](#)
- Art. 12(3)(c)(d) omitted by [S.I. 2019/532 Sch. 2 para. 13\(2\)\(a\)](#)
- Art. 12(3)(e)(iii) words omitted by [S.I. 2019/532 Sch. 2 para. 13\(2\)\(b\)\(i\)](#)
- Art. 12(3)(e)(iv) omitted by [S.I. 2019/532 Sch. 2 para. 13\(2\)\(b\)\(ii\)](#)
- Art. 12(3)(g) words substituted by [S.I. 2019/532 Sch. 2 para. 13\(2\)\(c\)](#)
- Art. 12(3)(h)-(l) omitted by [S.I. 2019/532 Sch. 2 para. 13\(2\)\(d\)](#)
- Art. 18(3)(b) omitted by [S.I. 2019/532 Sch. 2 para. 18\(3\)](#)
- Art. 18(5)(b) word omitted by [S.I. 2019/532 Sch. 2 para. 18\(4\)\(a\)](#)
- Art. 18(5)(g) word substituted by [S.I. 2019/532 Sch. 2 para. 18\(4\)\(b\)](#)
- Art. 18(6)(e) words substituted by [S.I. 2019/532 Sch. 2 para. 18\(5\)](#)
- Art. 18(7)(a) omitted by [S.I. 2019/532 Sch. 2 para. 18\(6\)\(a\)](#)
- Art. 18(7)(b) words omitted by [S.I. 2019/532 Sch. 2 para. 18\(6\)\(b\)\(i\)](#)
- Art. 18(7)(b) words omitted by [S.I. 2019/532 Sch. 2 para. 18\(6\)\(b\)\(ii\)](#)
- Art. 18(7)(c) omitted by [S.I. 2019/532 Sch. 2 para. 18\(6\)\(c\)](#)
- Art. 18(7)(f) words omitted by [S.I. 2019/532 Sch. 2 para. 18\(6\)\(d\)](#)
- Art. 18(7)(g) words substituted by [S.I. 2019/532 Sch. 2 para. 18\(6\)\(e\)](#)
- Art. 32(1)(a) words omitted by [S.I. 2019/532 Sch. 2 para. 23\(2\)\(a\)](#)

- Art. 32(1)(c) word omitted by S.I. 2019/532 Sch. 2 para. 23(2)(b)(i)
- Art. 32(1)(c) words omitted by S.I. 2019/532 Sch. 2 para. 23(2)(b)(ii)
- Art. 32(3)(c) words substituted by S.I. 2019/532 Sch. 2 para. 23(3)(b)
- Art. 34(3)(c) words substituted by S.I. 2019/532 Sch. 2 para. 25(2)
- Art. 44(1)(d) omitted by S.I. 2019/532 Sch. 2 para. 28(2)
- Art. 52(2)(d)(i) word substituted by S.I. 2019/532 Sch. 2 para. 32(2)(b)(i)
- Art. 52(2)(d)(i) words omitted by S.I. 2019/532 Sch. 2 para. 32(2)(b)(ii)
- Art. 54(3)(c) omitted by S.I. 2019/532 Sch. 2 para. 34(3)
- Art. 60(2)(a) omitted by S.I. 2019/532 Sch. 2 para. 38(2)
- Art. 60(2)(d) omitted by S.I. 2019/532 Sch. 2 para. 38(2)
- Art. 60(2)(e) omitted by S.I. 2019/532 Sch. 2 para. 38(2)
- Art. 60(2)(f) omitted by S.I. 2019/532 Sch. 2 para. 38(2)
- Art. 60(2)(g) omitted by S.I. 2019/532 Sch. 2 para. 38(2)
- Art. 61(2)(e) words omitted by S.I. 2019/532 Sch. 2 para. 39(3)(a)
- Art. 61(2)(f) word omitted by S.I. 2019/532 Sch. 2 para. 39(3)(b)
- Art. 62(2)(a)-(c) omitted by S.I. 2019/532 Sch. 2 para. 40(3)(a)
- Art. 62(2)(d) word substituted by S.I. 2019/532 Sch. 2 para. 40(3)(b)
- Art. 62(2)(e) words omitted by S.I. 2019/532 Sch. 2 para. 40(3)(c)
- Art. 62(5)(d)(e) omitted by S.I. 2019/532 Sch. 2 para. 40(5)
- Art. 62(8)(d) word omitted by S.I. 2019/532 Sch. 2 para. 40(6)(a)
- Art. 62(8)(f) omitted by S.I. 2019/532 Sch. 2 para. 40(6)(b)